#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-017590 Address: 333 Burma Road **Date Inspected:** 21-Oct-2010

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Mr.Oiu Wen. No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No

Yes No N/A **Delayed / Cancelled: Bridge No:** 34-0006 **Component:** Tower and Orthotropic Box Girder (OBG)

### **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

### NDT

#### **BAY 10**

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Bike path plate. The weld designations reviewed are as follows.

BK004A1-026-043, 044

NDT Notification No-07046

### **BAY 11**

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as West Tower lift 5 D/E corner. The weld designations reviewed are as follows.

# WELDING INSPECTION REPORT

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WSD1-TL5-4B/F-7, 36 NDT Notification No-07051

#### **BAY 11**

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Bike path plate. The weld designations reviewed are as follows.

BK004A6-021-114, 067 BK004A8-021-067, 114 NDT Notification No-07054

This QA Inspector observed the following work in progress:

### BAY 10: SMAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040268, Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 skin B mountain plate. Plate identified as CAMPSA-5-4, 5, 6. ZPMC QC Identified as Li Peng Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-4114. For more information see below attached picture number 1.

### OBG Bike path plate FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040302, 057180, Perform Flux Core Arc Welding (FCAW) on OBG bike path plate. Joint identified as BK007A1-001-009. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2231-B-U2-F-2. For more information see below attached picture number 2.

This QA Inspector observed ZPMC qualified welding personnel identified as 207745, Perform Submerged Arc Welding (SAW) on OBG bike path plate. Joint identified as BK007A1-001-009. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-L2c-S-2.

## **BAY 11**

## OBG Bike path plate FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040723, 054460, Perform Flux Core Arc Welding (FCAW) on OBG bike path plate. Joint identified as BK005B1-004-043. ZPMC QC Identified as Xu Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2231-B-U2-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 042218, Perform Flux Core Arc Welding (FCAW) on OBG bike path plate. Joint identified as BK004A8-020-023, 024, 035, 036. ZPMC QC Identified as Xu Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

# WELDING INSPECTION REPORT

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This QA Inspector observed ZPMC qualified welding personnel identified as 202340, 042218, Perform Flux Core Arc Welding (FCAW) on OBG bike path plate. Joint identified as BK004A2-021-015. ZPMC QC Identified as Xu Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132-2-Plug.

### Green Tagging

This QA inspector performed Visual Inspection for Green Tagging which were previously tested and accepted by ZPMC Quality Control personnel Mr. Qiu Wen and ABF QA personnel Mr. Liu Cheng. The members are identified as OBG Bike path BK004A1-025-043, 044. The green Tag number is identified as # 13747.

## Visual Inspection after Blast at North Tower Lift –III

This Quality Assurance (QA) Inspector performed random visual inspection of East Tower Lift-III inside Skin Plate A to E surfaces and diaphragm elevation 102.5M to 111.67M. After grit blasting at Blast shop number 2. Areas that marked for repair were recorded for future repair. And some areas requiring additional grinding were marked by QA Inspector and repaired by ZPMC personnel.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.





# **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Ho phone: 150002048250, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Shailesh	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer